

REMARKS

Applicants submit this Amendment in reply to the Office Action mailed January 25, 2005.

By this Amendment, Applicants amend claim 1 and add new claims 23-24. After entry of this Amendment, claims 1-24 are pending in this application. The originally-filed specification, claims, abstract, and drawings fully support the subject matter of amended claim 1 and new claims 23-24. No new matter is introduced.

On pages 2-3 of the Office Action, the drawings were objected to for allegedly not showing every feature of the invention, for example, "the third device port in the manifold and the second flexible flow valve, as claimed in claims 21 and 22." Applicants submitted Fig. 33, which shows these features, in an Amendment filed January 28, 2004. A copy of Fig. 33 is provided herewith. Accordingly, Applicants respectfully request withdrawal of the drawing objection.

On pages 3-4 of the Office Action, claims 1-3, 12, 13, and 17-22 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,805,125 B1 to Crump et al. ("Crump"); and claims 4-11 and 14-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Crump. Applicants respectfully traverse these rejections.

None of the cited references disclose or suggest the invention as claimed in independent claim 1. For example, independent claim 1 recites a suction adapter for use with first and second medical devices capable of accommodating suction including, among other aspects, "a flexible flow valve having an opening positioned in both a first flow path between the first device port and the second device port and a second flow

path between the first device port and the suction port, the flexible flow valve permitting simultaneous fluid flow between the suction port and both the first and second device ports, wherein the fluid flow path between the suction port and the first device port is through the opening, wherein the opening is configured to increase due to fluid flow from the first device port to the suction port.” Crump does not disclose or suggest at least these aspects of the claimed invention either alone or in combination with the other aspects of the claimed invention.

In the embodiments of Figs. 3A-3E, Crump discloses an endotracheal catheter system 200 including a manifold 204 and a catheter 208. The manifold 204 includes a plurality of ports 212a-d. The first port 212a is configured for attachment to the proximal end of an artificial airway, and the second port 212b is connected to a pair of ventilator tubes. (Col. 7, lines 15-25). The third port 212c is covered by a cap 216. The fourth port 212d is configured to allow the catheter 208 to slide therethrough and into the first port to enable suctioning of the patient. (Col. 7, lines 41-60). As explained in column 8, lines 33 to 52, a flap 232 is hingedly attached to, and pivots with respect to, an annular ring 236 inside fourth port 212d. The hinged attachment 240 is flexible so that suction through the distal end 208a of the catheter 208 draws the flap 232 proximally to contact the distal end 208a of the catheter 208. The flap 232 and related structures thereby form a “self-closing valve.”

The Office Action rejection does not indicate what structures of the Crump device correspond to the various claimed ports or flexible flow valve. Assuming *arguendo* that flap 232 corresponds to the “flexible flow valve” of claim 1, then fourth port 212d must correspond to the first device port of claim 1, and ports 212a, 212b must correspond to

the suction and second device ports of claim 1, based on the claimed valve position and flow paths. With this interpretation, Crump does not disclose or suggest at least an “opening [] configured to increase due to fluid flow from the first device port to the suction port.”

For example, in the embodiments of Figs. 3A-3E, a space between the unconnected end of flap 232 and ring 236 is not an “opening” of flap 232, and moreover, is not “configured to increase due to fluid flow from the first device port to the suction port.” Crump teaches that this space may change by (1) the physical movement of catheter 208 past flap 232 and into manifold 200, for example as shown in Fig. 4A, or (2) fluid flow from at least one of first port 212a and second port 212b (i.e., the alleged suction and second device ports) to fourth port 212d (i.e., the alleged first device port), as shown in Fig. 3B for example, which is the opposite of what is set forth in claim 1.

Indeed, Crump teaches against “wherein the opening is configured to increase due to fluid flow from the first device port to the suction port.” Flap 232 provides a selective obstruction of the airflow into the distal end 208a of the catheter 208 to improve catheter cleaning. (Col. 8, lines 25-31). Fluid flow from fourth port 212d to at least one of first port 212a and second port 212b, causing flap 232 to open distally, would impair this purpose of flap 232, and thus impermissibly render the device unsatisfactory for its intended purpose. See In Re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). Crump depends on flap 232 to create an underpressure in the area between flap 232 and distal end 208a, so that catheter 208 will suction secretions built up around distal end 208a. If there was fluid flow to first port 212a and/or second port 212b (for example, due to the ventilation at port 212b) that caused flap 232 to open

distally, the flap 232 would be unable to create an underpressure between flap 232 and distal end 208a. This would impede the ability of catheter 208 to remove secretions built up on distal end 208a.

In addition, in the embodiment of Fig. 3D, flap 232" includes an aperture 260. Aperture 260, however, is not "configured to increase due to fluid flow from the first device port to the suction port." Indeed, aperture 260 does not increase at all.

None of the other embodiments of Crump disclose or suggest the invention set forth in claim 1, and especially do not remedy the deficiencies of Figs. 3A-3E of Crump.

For example, the embodiment set forth in Figs. 4A-4C of Crump is similar to the embodiment of Figs. 3A-3E, with the embodiment in Figs. 4A-4C including an annular ring 326 upon which flap 336 is disposed when flap 336 is in a closed position. Annular ring 326 does not remedy the aforementioned deficiencies of Figs. 3A-3E of Crump.

In another example, Figs. 5A-5B disclose a "valve 424 [] formed by a piece of resilient material which opens as the catheter 408 is advanced therethrough, and closes when the catheter is withdrawn." (Col. 11, lines 21-27). Accordingly, valve 424 opens by the physical movement of the catheter, not due to fluid flow as set forth in claim 1.

In Figs. 6A-6D of Crump, there is no fluid flow from third port 512c to first port 512a and/or second port 512b. Fluid flows in the opposite direction, as when "the catheter 508 is withdrawn through the openings 528 and 532 in the disks, a vacuum is created proximally of the disks 520 and 524." (Col. 12, lines 18-20).

In Figs. 7A and 7B of Crump, the hole 580 or membrane 570 opens and closes by twisting of membrane 570, and not by any fluid flow. (Col. 12, lines 35-51). In

another example, shroud 620 of Figs. 8A and 8B is not disclosed as being flexible, does not include an opening, and moves position by pressing a plunger 624.

In further examples, the various embodiments set forth in Figs. 9A-9B, 10A-10B, 11A-11B, 12A-12C, 13A-13C, 14A-14D, and 15A-15B of Crump do not disclose an opening "configured to increase due to fluid flow from the first device port to the suction port." Indeed, the embodiment in Figs. 12A-12C does not mention fluid flow at all, and the other embodiments set forth in this paragraph only disclose fluid flow opposite the direction set forth in claim 1. (For example, see col. 15, lines 55-59; col. 16, lines 46-50; col. 18, lines 43-47; col. 19, lines 59-61; and col. 21, lines 23-44).

Accordingly, for at least these reasons, Applicants respectfully request withdrawal of the Section 102(b) and Section 103(a) rejections over Crump.

Applicants further submit that claims 2-24 depend from independent claim 1, and are therefore allowable for at least the same reasons that independent claim 1 is allowable. In addition, at least some of the dependent claims recite unique combinations that are neither taught nor suggested by the cited references, and therefore at least some also are separately patentable.

Applicants respectfully assert that this Amendment places claims 1-24 in condition for allowance. This claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. For example, Applicants do not necessarily

agree with comments on pages 2 and 3 of the Final Office Action regarding the nature of dependent claims 17-20 or the Section 103 rejection of dependent claims 4-11 and 14-16. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.


In discussing the specification, claims, and drawings in this Amendment, it is to be understood that Applicants are in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification and/or shown in the drawings. Rather, Applicants are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

Please grant any extensions of time, not otherwise provided for, that are required to enter this Amendment, and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: April 25, 2005

By: 

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Attachment: Copy of Fig. 33 filed on January 28, 2004